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WAR FOOD ADMINISTRATION

Office of Marketing Services

WASHINGTON 25, D. C.



April 1945

To: Cotton Specialists and Breeders

A publication entitled "Results of Fiber and Spinning Tests for Some Varieties of Upland Cotton Grown in the United States, Crop of 1944" is now being distributed. This publication, as the title indicates, summarizes the fiber and spinning test results for upland cottons produced during the 1944 season at the various Federal and State experiment stations in connection with the Federal-State Cotton Breeding and Improvement Program. In view of the fact that this series of publications is now being rather widely distributed and is receiving considerable attention on the part of cotton manufacturers and the cotton trade, it was decided to include only those varieties and strains that are now in commercial production and selections that are expected to go into commercial production in the near future. This course was followed at the suggestion of Dr. H. W. Barre of the Bureau of Plant Industry, Soils and Agricultural Engineering.

Attached hereto are tables containing test results for those cottons that were tested from the 1944 crop but which were not included in the results published for general distribution to the cotton industry. The distribution of these tables is being limited to experiment station workers and others who may be interested in these cottons which represent, for the most part, breeders' material that is still in the experimental stage. The basis for interpretation of test results and weather data for the various stations as incorporated in the published report, are applicable also to the data contained in these tables.

It is believed that this method of making the test results available will meet the requirements of those interested and will obviate the possibility of having spinners and others becoming concerned about new selections which, although they may indicate very desirable spinning performance, may have very limited, if any, commercial possibilities.

Very truly yours,

John W. Wright  
Chief, Research and Testing Division  
Cotton and Fiber Branch

Attachments

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Table 1. - Commercial classification and fiber laboratory test results for some varieties of upland cotton grown at specified locations, Crop of 1944 - continued

Place of growth and variety  (1)	Commercial classification		Fiber laboratory test results							
	Grade	Staple length	Length (fibrograph)			Fineness (weight per inch of fiber) (7)	Mature fibers (8)	Fiber 1/ tensile strength (9)	X-ray angle (10)	
			Upper	Mean	Uni-					
			half	mean	formity					
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	
		Inches	Inches	Inches	Index	Micrograms	Percent	1,000 lbs. Per sq. in.	Degrees	
Statesville, N. C.										
Mexican x Farm Relief x Coker 100-2-1-1	GM EW	31/32	1.00	0.79	79	4.2	75	77	37	
Mexican x Farm Relief x Coker 100-2-2-1	GM EW	31/32	.97	.75	77	4.1	69	71	41	
Stoneville 4B-5-1-1	GM EW	1	.93	.74	80	4.7	76	80	33	
Florence, S. C.										
Deltapine 37-45-267	GM EW	1-5/16	1.27	.92	72	3.3	71	71	40	
Experiment, Ga.										
CSS 3720	M	15/16	.95	.74	78	4.3	73	76	37	
Empire 7-8	SLM	1	1.00	.77	77	4.2	69	72	36	
Empire 9-11	SLM	1-1/32	1.00	.76	76	4.3	69	78	34	
Empire 2-5	M	1-1/32	1.03	.78	76	4.3	67	76	35	
Empire 8-5	SLM	1-1/32	.98	.78	80	4.3	67	74	36	
Empire 1-2-5	M	1-1/32	.98	.79	81	4.5	69	74	36	
Empire 10-10	SLM	1-1/32	1.02	.81	79	4.5	66	76	34	
Empire C	M	1	1.00	.77	77	4.2	65	76	34	
Empire 2-4	M	1	1.00	.76	76	4.6	70	73	35	
Empire 9-2	SLM	1-1/32	1.01	.77	76	4.1	68	76	35	
Empire 5-4	SLM	1-1/32	1.03	.77	75	4.2	66	72	37	
Empire 1-1	M	1-1/32	1.01	.79	78	3.6	67	72	36	
Empire 10-4	M	1-1/32	.98	.76	78	4.4	68	77	34	
Tifton, Ga.										
Station C-42	M EW	1	.95	.72	76	3.9	63	68	43	
Knoxville, Tenn.										
Acala 911 (330-1-8-4-2)	SM EW	1-1/8	1.26	.91	72	4.2	76	82	34	
Coker 33-12 (289-3-5)	M	1-1/32	1.03	.72	70	4.8	87	73	39	
Delfos 339-3-2-6-3	M	31/32	1.01	.74	73	5.0	84	79	36	
Stoneville 37-13	M	15/16	.89	.70	79	5.2	84	81	35	
Baton Rouge, La.										
Hybrid 62-75-16	SLM	29/32	.88	.68	77	5.3	79	71	35	
Calhoun, La.										
Hybrid 35 x 11 x 11-01	M	15/16	.96	.76	79	4.7	76	82	34	
Marianna, Ark.										
C 5 (Acala)	SM	1-1/32	1.01	.83	82	4.4	73	94	29	
C 7 (Acala)	M	31/32	.96	.79	82	5.2	81	77	35	
Deltapine A-12	M	1	1.03	.79	77	4.5	71	79	36	
Deltapine A-5	M	31/32	.98	.77	79	4.6	76	80	34	
Rowden 60-A	SLM	1	1.05	.86	82	4.9	74	84	32	
E4 (Stoneville)	M	31/32	1.08	.85	79	4.3	73	78	31	
Supreme 10	M	1	1.06	.84	79	4.6	72	80	30	
Chickasha, Okla.										
Acala 2496	SM	15/16	.88	.68	77	4.5	73	79	33	
Acala 6553-11-4-3	SM	29/32	.86	.67	78	4.3	70	86	30	
Greenville, Texas										
Acala 36-13	M	15/16	.91	.68	75	4.0	71	87	35	
Acala 100-5	M	31/32	.96	.72	75	3.8	73	89	35	
Acala 108-2	M	31/32	.92	.71	77	4.4	69	84	32	
Acala 118	M br	15/16	.92	.70	76	4.2	74	84	34	
Acala 204-2	M	31/32	.91	.69	76	3.8	77	84	35	
ASA	M	31/32	.93	.71	76	4.1	74	86	32	
Kekchi 7-3	M	1	.95	.70	74	3.4	71	89	29	
Rowden 60-A	M	15/16	.89	.66	74	5.1	75	84	30	
Textone	SLM	15/16	.89	.67	75	4.0	74	84	30	

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1/ Converted from Pressley index according to the following formula: Tensile strength = (10.8116 x Pressley index - 0.12)

Prepared in the Research and Testing Division, Cotton and Fiber Branch, Office of Marketing Services.





Table 2. - Manufacturing performance and yarn quality results for some varieties of upland cotton grown at specified locations, Crop of 1944 - continued

Place of growth and variety  (1)	Picker and card waste  (2)	Skein strength of carded yarn			Equivalent staple length 2/  (6)	Neps per 100 sq. inches of card web  (7)	Yarn appearance 3/		
		22s	36s	Third count spun 1/  (5)			22s	36s	Third count spun 4/  (10)
		Percent	Pounds	Pounds			Grade	Grade	Grade
Statesville, N. C.									
Mexican x Farm Relief x									
Coker 100-2-1-1	7.7	92	49	32 (50s)	15/16	12	B	B -	B -
Mexican x Farm Relief x									
Coker 100-2-2-1	7.2	85	44	29 (50s)	7/8 -	13	B +	B -	C +
Stoneville 4B-5-1-1	6.8	97	50	32 (50s)	31/32	8	B +	B	B
Florence, S. C. 3/									
Deltapine 37-45-867	6.8	122	66	35 (60s)	1-1/4	36	C +	C	C
Experiment, Ga.									
CSS 3720	6.7	94	49	32 (50s)	15/16 +	12	B +	B	B
Empire 7-8	6.2	97	50	33 (50s)	31/32	11	B +	B	B -
Empire 9-11	6.5	96	51	26 (60s)	1 -	16	B +	B	B -
Empire 2-5	7.5	96	51	26 (60s)	1	14	B +	B	B -
Empire 8-5	7.5	95	50	24 (60s)	31/32 -	13	B +	B	B
Empire 1-2-5	7.7	95	51	25 (60s)	31/32 +	13	B	B	B
Empire 10-10	7.2	97	52	26 (60s)	1	17	B	B	B -
Empire C	7.2	99	51	35 (50s)	1	15	B +	B	B -
Empire 2-4	6.5	97	50	33 (50s)	31/32	14	B	B	B
Empire 9-2	6.5	96	51	26 (60s)	1 -	14	B +	B -	B -
Empire 5-4	7.7	95	50	25 (60s)	31/32	18	B +	B	B -
Empire 1-1	7.1	94	51	25 (60s)	31/32	16	B +	B	B -
Empire 10-4	7.0	96	51	25 (60s)	31/32 +	13	B	B	B -
Tifton, Ga.									
Station C-42	7.6	91	48	31 (50s)	15/16 -	8	B	B -	C +
Knoxville, Tenn.									
Acala 911 (330-1-8-4-2)	7.4	105	56	26 (60s)	1-1/16 -	7	A -	B	B -
Coker 33-12 (289-3-5)	8.1	91	47	22 (60s)	29/32 +	13	B +	B	B -
Delfos 339-3-2-6-3	6.2	93	47	30 (50s)	29/32 +	8	B +	B +	B -
Stoneville 37-13	8.0	91	46	29 (50s)	29/32 -	11	B +	A -	B
Baton Rouge, La.									
Hybrid 62-75-16	4.5	78	38	27 (44s)	3/4 +	8	B +	B	B -
Calhoun, La.									
Hybrid 35 x 11 x 11 - 01	6.0	96	47	28 (50s)	29/32 +	5	B +	B	B
Marianna, Ark.									
C 5 (Acala)	6.1	103	54	23 (60s)	1	13	B +	B	B -
C 7 (Acala)	4.8	89	43	24 (50s)	27/32 -	3	A -	B +	B
Deltapine A-12	6.7	95	52	31 (50s)	31/32 -	10	B +	B	B -
Deltapine A-5	4.4	97	51	30 (50s)	31/32 -	7	B +	B	B
Rowden 60-A	5.8	100	49	30 (50s)	31/32 -	11	B	B	B
E4 (Stoneville)	5.3	102	54	34 (50s)	1 +	16	B +	B -	B -
Supreme 10	6.1	99	52	32 (50s)	31/32 +	12	B +	B	B
Chickasha, Okla.									
Acala 2496	7.2	97	53	31 (50s)	31/32 +	14	B +	B	B -
Acala 6553-11-4-3	7.6	99	51	38 (44s)	31/32	12	B +	B +	B +
Greenville, Texas									
Acala 36-13	7.4	100	56	34 (50s)	1-1/32	17	B +	B -	B -
Acala 100-5	7.2	109	58	38 (50s)	1-3/32	28	B	C +	C +
Acala 108-2	7.0	106	53	32 (50s)	1 +	21	B +	B	B
Acala 118	7.3	105	54	34 (50s)	1-1/32	27	B -	B -	B -
Acala 204-2	7.5	110	55	36 (50s)	1-1/16 +	32	B -	C +	C
ASA	7.7	106	56	36 (50s)	1-1/16 -	22	B +	B -	B -
Kekchi 7-3	8.7	106	58	37 (50s)	1-1/16 +	25	B -	C +	C
Rowden 60-A	7.7	102	52	32 (50s)	1 -	21	B	C +	C +
Textone	8.2	101	54	35 (50s)	1-1/32 -	22	B	B	B -

(Continued on following page)

1/ Figures in parenthesis indicate yarn count spun.

2/ Average for three counts of yarn.

3/ In accordance with yarn appearance standards of American Society for Testing Materials.

4/ See column 5, footnote 1.





Table 1. - Commercial classification and fiber laboratory test results for some varieties of upland cotton grown at specified locations, Crop of 1944

Place of growth and variety  (1)	Commercial classification		Fiber laboratory test results						
	Grade	Staple length	Length (fibrograph)			Fineness (weight per inch of fiber)	Mature fibers	Fiber 1/ tensile strength	X-ray angle
			Upper	half	Uni-				
			mean	mean	formity ratio				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		Inches	Inches	Inches	Index	Micrograms	Percent	1,000 lbs. per sq. in.	Degrees
Temple, Texas									
B 4 (Rowden)	M	15/16	0.86	0.67	78	4.4	75	85	31
E 4 (Stoneville 2)	SLM	15/16	.82	.63	77	3.9	65	79	28
Supreme (Rowden)	M	29/32	.89	.67	75	5.6	77	86	30
College Station, Texas (Brazos Farm)									
Oklahoma Triumph x Wesson									
Mebane 5-128	SLM	15/16	.84	.65	77	4.4	73	71	38
Rowden x Delfos 719-B124	SLM	15/16	.86	.66	77	5.6	76	82	32
Stoneville 2B-85	SLM	15/16	.89	.68	76	4.3	71	81	31
Stoneville 2B x Rogers									
Acala 4-128	SLM	15/16	.89	.66	74	4.2	71	85	32
Supreme 10	SLM	15/16	.92	.71	77	4.6	76	80	33
Sunshine x D.&P.L. 11A-66	SLM	15/16	.91	.69	76	5.6	82	89	31
Tyler, Texas									
Rhynes Cook x Lankart x Miller	M	15/16	.88	.71	81	5.6	80	76	37
Rhynes Cook x D.&P.L. 11A x D.&P.L. 12	M	15/16	.91	.73	80	5.3	82	78	35
Rhynes Cook x Lankart x Miller	M	15/16	.83	.66	80	5.8	79	72	37
Weslaco, Texas									
Supreme 10 (Rowden x Stoneville 2B)	M	1-3/32	1.04	.78	75	4.0	68	80	34
Chilllicothe, Texas									
Lockett 140-46	SLM-	15/16	.81	.67	83	5.8	82	84	32
Mars L. S. Cluster	SLM-	15/16	.83	.69	83	5.5	83	86	32
Lubbock, Texas									
C. A. 1	SLM	15/16	.92	.73	79	4.6	74	72	39
C. A. 51	SM	7/8	.84	.69	82	5.0	79	72	38
C. A. 114	M	31/32	.93	.73	78	4.7	78	78	37
C. A. 89A	SM ltsp	31/32	.91	.69	76	4.4	76	80	36
State College, New Mexico									
Acala W-29-4	SM-	1-5/32	1.19	.96	81	3.4	76	88	33
Acala W-29-E	M-	1-1/8	1.14	.90	79	3.6	71	82	36
Acala W-20-1-5-2	SM-	1-3/32	1.17	.92	79	3.7	71	82	37
Acala 40-26-1	SM-	1-5/32	1.18	.85	72	3.2	63	82	37
Acala MA 239	M-	1-1/4	1.33	1.00	75	2.9	76	82	39
Sacaton, Arizona									
Acala x Durango F6 12-1-1	SM-	1-1/16	1.02	.76	75	4.4	84	84	36
Acala x Durango F6 25-1-14	M	1-1/32	1.03	.81	79	3.9	81	88	33
Wilds 9-2-3-4-21	SM-	1-1/16	1.07	.81	76	3.7	76	84	36
Ewing Long Staple 1-1-5	M EW	1-3/32	1.12	.88	79	3.6	76	92	33
Acala 1-1-7 (Safford growth)	SLM EW	1-1/32	1.04	.79	76	4.3	82	74	41
Shafter, California									
Acala 1517 4-42-44-60	GM	1-1/16	1.10	.89	81	4.2	79	88	32
Acala 1517 1-23-11-3	GM	1-1/32	1.06	.92	87	4.6	85	76	39
Acala 1517 1-23-11-5	GM	1-1/16	1.09	.88	81	4.3	82	78	37
Acala 1517 5-12-7-6	GM	1-1/8	1.15	.93	81	3.6	76	95	31
Acala 1517 7-49-1-30	GM	1-1/16	1.11	.85	77	4.0	82	85	33
Acala 585-4-1-11-4	GM	1-1/16	1.10	.83	75	3.6	77	88	31
Acala 585-4-1-11-34	GM	1-1/16	1.06	.80	75	4.1	81	77	40
Acala x Durango x Acala F5-27	GM	1-1/16	1.10	.88	80	3.9	80	82	38
Acala x Hopi x Acala 5 F3- 6-1	GM	1-1/16	1.07	.93	87	3.7	86	104	28

1/ Converted from Pressley index according to the following formula: Tensile Strength = (10.8116 x Pressley index) - 0.12

Prepared in the Research and Testing Division, Cotton and Fiber Branch, Office of Marketing Services.





Table 2. - Manufacturing performance and yarn quality results for some varieties of upland cotton grown at specified locations, Crop of 1944 - continued

Place of growth and variety (1)	Picker and card waste (2)	Skein strength of carded yarn			Equivalent staple length 2/ (6)	Neps per 100 sq. inches of card web (7)	Yarn appearance 3/		
		22s	36s	Third count spun 1/			22s	36s	Third count spun 4/
		(3)	(4)	(5)			(8)	(9)	(10)
	Percent	Pounds	Pounds	Pounds	Inches	Number	Grade	Grade	Grade
Temple, Texas									
B 4 (Rowden)	6.4	102	53	32 (50s)	1	8	B+	B-	B
E 4 (Stoneville 2)	8.9	92	47	29 (50s)	29/32+	23	B	B-	B-
Supreme (Rowden)	8.9	95	47	34 (44s)	29/32	6	B+	B	B
College Station, Texas (Brazos Farm)									
Oklahoma Triumph x Wesson									
Mebane 5-128	8.7	89	46	28 (50s)	7/8+	14	B+	B	B-
Rowden x Delfos 719-B124	10.0	84	42	24 (50s)	13/16	15	B	B-	C+
Stoneville 2B-85	7.5	98	53	33 (50s)	1	13	B+	B+	B
Stoneville 2B x Rogers									
Acala 4-128	8.2	100	54	34 (50s)	1+	32	B+	B-	B-
Supreme 10	8.2	99	52	32 (50s)	31/32+	16	B+	B	B
Sunshine x D.&P.L. 11A-66	8.3	94	46	26 (50s)	7/8+	8	B	B-	B-
Tyler, Texas									
Rhynes Cook x Lankart x Miller	7.6	94	46	28 (50s)	29/32	4	B+	B	B-
Rhynes Cook x D.&P.L. 11A x D.&P.L. 12	6.3	99	50	32 (50s)	31/32	4	A-	B+	B
Rhynes Cook x Lankart x Miller	7.6	88	43	26 (50s)	27/32+	5	B	B	B
Weslaco, Texas									
Supreme 10 (Rowden x Stoneville 2B)	5.0	104	56	28 (60s)	1-1/16	10	B+	B-	B
Chillicothe, Texas									
Lookett 140-46	9.9	88	45	24 (50s)	27/32-	6	A-	B+	B
Mars L. S. Cluster	9.4	88	45	24 (50s)	27/32	7	A-	B+	B
Lubbock, Texas									
C. A. 1	5.4	86	44	29 (50s)	7/8	6	B+	B	B
C. A. 51	5.6	85	42	33 (44s)	27/32	13	B+	B+	B
C. A. 114	5.3	93	51	32 (50s)	31/32-	7	B+	B	B-
C. A. 89A	5.3	90	47	31 (50s)	29/32+	12	B+	B	C+
State College, New Mexico									
Acala W-29-4	6.4	133	75	40 (60s)	1-3/8	23	B-	B-	C
Acala W-29-E	7.2	119	67	34 (60s)	1-7/32+	21	B	C+	C+
Acala W-20-1-5-2	7.3	118	65	35 (60s)	1-7/32+	32	C+	C+	C
Acala 40-26-1	7.2	113	60	32 (60s)	1-5/32	37	C	C	C
Acala MA 239	8.0	127	70	38 (60s)	1-5/16	41	C-	D+	D
Sacaton, Arizona									
Acala x Durango F6 12-1-1	6.3	109	57	29 (60s)	1-3/32	18	B	B-	B-
Acala x Durango F6 25-1-14	6.8	112	61	31 (60s)	1-5/32-	19	B	B-	C+
Wilds 9-2-3-4-21	7.7	116	63	33 (60s)	1-3/16	14	B	C+	C+
Ewing Long Staple 1-1-5	8.3	121	67	34 (60s)	1-1/4 -	17	B-	C+	C
Acala 1-1-7 (Safford growth)	10.9	85	45	22 (60s)	7/8	19	C+	C+	C-
Shafter, California									
Acala 1517 4-42-44-60	5.2	126	67	34 (60s)	1-1/4+	12	B	B	B
Acala 1517 1-23-11-3	5.8	106	58	27 (60s)	1-1/16+	11	A-	B+	B+
Acala 1517 1-23-11-5	5.9	115	62	31 (60s)	1-5/32	16	B+	B	B
Acala 1517 5-12-7-6	5.7	141	79	41 (60s)	1-7/16	18	B	B-	B-
Acala 1517 7-49-1-30	5.4	128	68	35 (60s)	1-9/32	13	B+	B	B-
Acala 585-4-1-11-4	5.6	121	63	33 (60s)	1-7/32-	22	B	C+	C
Acala 585-4-1-11-34	6.0	100	54	27 (60s)	1-1/32	17	B	B	C+
Acala x Durango x Acala F5-27	5.3	112	61	32 (60s)	1-5/32	13	B	B	B-
Acala x Hopi x Acala 5 F3-6-1	4.2	152	84	43 (60s)	1-17/32-	11	B+	B+	B+

1/ Figures in parenthesis indicate yarn count spun.

2/ Average for three counts of yarn.

3/ In accordance with the yarn appearance standards of American Society for Testing Materials.

4/ See Column 5, footnote 1.

